Model year	Average fuel economy standard (miles per gallon)
1998	12.1

(14) Qvale Automotive Group Srl.

Model year	Average fuel economy standard (miles per gallon)
2000	22.0
2001	22.0

(15) Spyker Automobielen B.V.

AVERAGE FUEL ECONOMY STANDARD

Model year	Miles per gallon
2006	18.9
2007	18.9

[43 FR 28204, June 29, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §531.5 see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§531.6 Measurement and calculation procedures.

(a) The average fuel economy of all passenger automobiles that are manufactured by a manufacturer in a model year shall be determined in accordance with procedures established by the Administrator of the Environmental Protection Agency under section 502(a)(1) of the Act and set forth in 40 CFR part 600.

(b) A manufacturer that is eligible to elect a model year in which to include value added in Mexico as domestic value, under subparagraphs (B)(i) and (B)(iii) of 49 U.S.C. 32904(b)(3), shall notify the Administrators of the Environmental Protection Agency and the National Highway Traffic Safety Administration of its election not later than 60 days before it begins production of automobiles for the model year. If an eligible manufacturer does not elect a model year before January 1, 2004, any value added in Mexico will be considered domestic value for automobiles manufactured in the next model year beginning after January 1, 2004, and in subsequent model years.

[42 FR 33552, June 30, 1977, as amended at 64 FR 27203, May 19, 1999]

APPENDIX A TO PART 531—EXAMPLE OF CALCULATING COMPLIANCE UNDER §531.5(C)

Assume a hypothetical manufacturer (Manufacturer X) produces a fleet of domestic passenger automobiles in MY 2012 as follows:

APPENDIX A, TABLE 1

Model type				Description	Actual measured fuel economy (mpg)	Volume
Group	Carline name	Basic engine (L)	Transmission class			
1	PC A FWD	1.8	A5	2-door sedan	34.0	1,500
2	PC A FWD	1.8	M6	2-door sedan	34.6	2,000
3	PC A FWD	2.5	A6	4-door wagon	33.8	2,000
4	PC A AWD	1.8	A6	4-door wagon	34.4	1,000
5	PC A AWD	2.5	M6	2-door hatchback	32.9	3,000
6	PC B RWD	2.5	A6	4-door wagon	32.2	8,000
7	PC B RWD	2.5	A7	4-door sedan	33.1	2,000
8	PC C AWD	3.2	A7	4-door sedan	30.6	5,000
9	PC C FWD	3.2	M6	2-door coupe	28.5	3,000
Total						27,500

NOTE TO APPENDIX A, TABLE 1. Manufacturer X's required corporate average fuel economy level standard under §531.5(c) would first be calculated by determining the fuel economy targets applicable to each unique model type and footprint combination for model type groups 1–9 as illustrated in Appendix A, Table 2:

APPENDIX A, TABLE 2

Manufacturer X calculates a fuel economy target standard for each unique model type and footprint combination.

Model type				Description	Base tire size	Wheel-base (inches)	Track width F&R average (inches)	Footprint (ft^2)	Volume	Fuel economy target standard (mpg)
Group	Carline name	Basic engine (L)	Trans-mission class							
1a	PC A FWD	1.8	A5	2-door sedan	205/75R14	99.8	61.2	42.4	900	35.01
1b	PC A FWD	1.8	A5	2-door sedan	215/70R15	99.8	60.9	42.2	600	35.14
2	PC A FWD	1.8	M6	2-door sedan	215/70R15	99.8	60.9	42.2	2,000	35.14
3	PC A FWD	2.5	A6	4-door wagon	215/70R15	100.0	60.9	42.3	2,000	35.08
4	PC A AWD	1.8	A6	4-door wagon	235/60R15	100.0	61.2	42.5	1,000	35.95
5	PC A AWD	2.5	M6	2-door hatchback	225/65R16	99.6	59.5	41.2	3,000	35.81
6a	PC B RWD	2.5	A6	4-door wagon	235/65R16	109.2	67.2	51.0	4,000	30.19
6b	PC B RWD	2.5	A6	4-door wagon	265/55R18	109.2	66.8	50.7	4,000	30.33
7	PC B RWD	2.5	A7	4-door sedan	235/65R17	109.2	67.8	51.4	2,000	29.99
8	PC C AWD	3.2	A7	4-door sedan	265/55R18	111.3	67.8	52.4	5,000	29.52
9	PC C FWD	3.2	M6	2-door coupe	225/65R16	111.3	67.2	51.9	3,000	29.76
Total									27,500	

NOTE TO APPENDIX A, TABLE 2. With the appropriate fuel economy targets determined for each unique model type and footprint combination, Manufacturer X's required fuel economy target standard would be calculated as illustrated in Appendix A, Figure 1.

Appendix A, Figure 1

Calculation of Manufacturer X's target fuel economy standard

(Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year)

/ ((Group 1a Volume / Group 1a Target) + ((Group 1b Volume / Group 1b Target) + … +

(Group 9 Volume / Group 9 Target)) =

27500 / (900/35.01 + 600/35.14 + 2000/35.14 + 2000/35.08 + 1000/34.95 + 3000/35.81 +

4000/30.19 + 4000/30.33 + 2000/29.99 + 5000/25.52 + 3000/29.76) = 31.6

$$\frac{\text{Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year}}{\left[\frac{\text{Group1a Volume}}{\text{Group1a Target}}+\frac{\text{Group1b Volume}}{\text{Group1b Target}}+\frac{\text{Group2 Volume}}{\text{Group2 Target}}+\frac{\text{Group3 Volume}}{\text{Group3 Target}}+\cdots+\frac{\text{Group7 Volume}}{\text{Group7 Target}}+\frac{\text{Group8 Volume}}{\text{Group8 Target}}+\frac{\text{Group9 Volume}}{\text{Group9 Target}}\right]}$$

$$\frac{27{,}500}{\left[\frac{900}{35.27}+\frac{600}{35.40}+\frac{2000}{35.40}+\frac{2000}{35.35}+\frac{1000}{35.21}+\frac{3000}{36.12}+\frac{4000}{30.40}+\frac{4000}{30.55}+\frac{2000}{30.18}+\frac{5000}{29.71}+\frac{3000}{29.93}\right]}$$

Fleet's target fuel economy standard = 31.6 mpg

Appendix A, Figure 2

Calculation of Manufacturer X's actual fuel economy value.

(Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year)

/ ((Group 1 Volume / Group 1 Fuel Economy) + ((Group 2 Volume / Group 2 Fuel

Economy) + … + (Group 9 Volume / Group 9 Fuel Economy)) =

27500 / (1500/34.0 + 2000/34.6 + 2000/33.8 + 1000/34.4 + 3000/32.9 + 8000/32.2 +

2000/33.1 + 5000/30.6 + 3000/28.5) = 32.0

$$\frac{\text{Manufacturer's Domestic Passenger Automobile Production for Applicable Model Year}}{\left[\frac{\text{Group1 Volume}}{\text{Group1 FuelEcon}}+\frac{\text{Group2 Volume}}{\text{Group2 FuelEcon}}+\frac{\text{Group3 Volume}}{\text{Group3 FuelEcon}}+\frac{\text{Group4 Volume}}{\text{Group4 FuelEcon}}+\frac{\text{Group5 Volume}}{\text{Group5 FuelEcon}}+\frac{\text{Group6 Volume}}{\text{Group6 FuelEcon}}+\frac{\text{Group7 Volume}}{\text{Group7 FuelEcon}}+\frac{\text{Group8 Volume}}{\text{Group8 FuelEcon}}+\frac{\text{Group9 Volume}}{\text{Group9 FuelEcon}}\right]}$$

$$\frac{27{,}500}{\left[\frac{1500}{34.0}+\frac{2000}{34.6}+\frac{2000}{33.8}+\frac{1000}{34.4}+\frac{3000}{32.9}+\frac{8000}{32.2}+\frac{2000}{33.1}+\frac{5000}{30.6}+\frac{3000}{28.5}\right]}$$

Fleet's actual fuel economy = 32.0 mpg

NOTE TO APPENDIX A, FIGURE 2. Since the actual average fuel economy of Manufacturer X's fleet is 32.0 mpg, as compared to its required fuel economy level of 31.8 mpg, Manufacturer X complied with the CAFE standard for MY 2012 as set forth in §531.5(c).

[75 FR 25719, May 7, 2010]

PART 533—LIGHT TRUCK FUEL ECONOMY STANDARDS

Sec.

533.1 Scope.
533.2 Purpose.
533.3 Applicability.
533.4 Definitions.
533.5 Requirements.
533.6 Measurement and calculation procedures.
APPENDIX A TO PART 533—EXAMPLE OF CALCULATING COMPLIANCE UNDER §533.5 PARAGRAPH (g)

AUTHORITY: 49 U.S.C. 32902; delegation of authority at 49 CFR 1.50.

§533.1 Scope.

This part establishes average fuel economy standards pursuant to section 502(b) of the Motor Vehicle Information and Cost Savings Act, as amended, for light trucks.

[42 FR 13807, Mar. 14, 1977, as amended at 43 FR 12013, Mar. 23, 1978]